

# Furniture Flame Retardancy Partnership: Environmental Profiles of Chemical Flame-Retardant Alternatives for Low-Density Polyurethane Foam





United States  
Environmental Protection Agency  
Design for the Environment (7406M)

EPA 742-R-05-002B  
September 2005  
[www.epa.gov/dfe](http://www.epa.gov/dfe)



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To learn more about the Design for the Environment (DfE) Furniture Flame Retardancy Partnership or the DfE Program, please visit the DfE Program web site at: [www.epa.gov/dfe](http://www.epa.gov/dfe)

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## **Acknowledgments**

This alternatives assessment was prepared by Eastern Research Group and Syracuse Research Corporation under funding from the U.S. Environmental Protection Agency's Design for the Environment (DfE) Program in the Economics, Exposure, and Technology Division (EETD) of the Office of Pollution Prevention and Toxics (OPPT) and Region IX.

This document was produced as part of the DfE Furniture Flame Retardancy Partnership, under the direction of the project's steering committee. Special thanks to the Risk Assessment Division of OPPT, for their assistance in evaluating the chemicals in the report. Many thanks also to all the stakeholders who participated in the technical workgroups and who provided valuable input for the report.

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## Introduction

This volume contains detailed hazard reviews of available information for each of the chemicals in the 14 flame-retardant formulations evaluated through the Furniture Flame Retardancy Partnership.

These detailed hazard reviews are the basis for the summary assessments in section 4 of volume I. The summary assessments were in turn used as the basis for summary table 4.1, which provides top-level information on all of the alternatives.

The goal of the Furniture Flame Retardancy Partnership is to enable informed decision making in the process of selecting alternatives to pentaBDE. Production of pentaBDE ceased at the end of 2004. The industry is now adopting alternative flame retardants to meet performance requirements. Given the large quantities of flame retardants used in foam and furniture manufacture, the potential for adverse effects to health and the environment should be addressed.

EPA developed this flame-retardant alternatives evaluation through stakeholder participation. The information in this volume represents the first phase of data collection. The data were collected in a manner consistent with the HPV Chemical Challenge Program guidance on searching for existing chemical information and data (<http://www.epa.gov/chemrtk/srchguid.htm>). This information was collected and data were evaluated for adequacy following HPV data adequacy guidelines (<http://www.epa.gov/chemrtk/datadfin.htm>). The evaluation protocol differed from the HPV program in that EPA reviewed the experimental studies and developed the summaries. In the HPV Program, EPA and the public participate in the review of the robust summaries developed by HPV Challenge Program sponsors. The purpose of data collection in this Partnership was to identify data gaps, not determine data needs.

EPA used EPA's New Chemicals Program criteria to interpret the data contained in the detailed hazard reviews and identify potential hazard concerns in volume 1 for the purposes of informing decision making. When measured data were not available, estimates for chemicals were determined when possible to identify areas with a potentially high hazard concern. EPA also identified potentially low and moderate hazard concerns.

The information presented in this volume will provide an appropriate starting point for longer-term efforts to fully characterize hazard, exposure and risk issues associated with flame-retardant alternatives.